

REMARKS

In the Office Action dated October 24, 2006, claims 32, 39, and 41 were objected to; claims 28 and 29 were rejected under 35 U.S.C. § 112, ¶ 2; claim 11 was rejected under § 102 over U.S. Patent No. 4,812,177 (Maehara); claim 40 was rejected under § 102 over U.S. Patent No. 3,689,325 (Hayden); claims 2, 27, 28, 30, 31, 33, and 44-46 were rejected under § 103 over U.S. Patent No. 5,941,313 (Arizmendi) in view of Maehara; claims 2, 3, 27, 28, 30, 31, 33, 35, 36, and 44-49 were rejected under § 103 over U.S. Patent No. 4,151,875 (Sullaway) in view of Maehara; claims 5 and 38 were rejected under § 103 over U.S. Patent No. 6,250,385 (Montaron) in view of Maehara; claim 6 was rejected under § 103 over U.S. Patent No. 5,131,470 (Miszewski) in view of Hayden; claim 7 was rejected under § 103 over U.S. Patent No. 6,454,001 (Thompson) in view of Hayden; claims 8 and 9 were rejected under § 103 over U.S. Patent No. 4,191,265 (Bosse-Platiere) in view of Hayden; claim 10 was rejected under § 103 over U.S. Patent No. 4,081,031 (Mohaupt) in view of Hayden; claim 29 was rejected under § 103 over Arizmendi in view of Maehara; claim 29 was rejected under § 103 over Sullaway in view of Maehara and Montaron; claims 37, 42, and 43 were rejected under § 103 over U.S. Patent No. 5,979,560 (Nobileau) in view of Maehara; and claims 40 and 41 were rejected under § 103 over U.S. Patent No. 1,917,135 (Little) in view of Hayden.

DISQUALIFICATION OF MONTARON UNDER 35 U.S.C. § 103(C)

Montaron (U.S. Patent No. 6,250,385) is assigned to the same Assignee as the present application, namely Schlumberger Technology Corporation. Since the present application and Montaron were, at the time the present invention was made, owned by or subject to obligation of assignment to the same entity, Montaron is disqualified as prior art pursuant to 35 U.S.C. § 103(c). Note that the issue date of Montaron is June 26, 2001, which is *after* the filing date of the present application: May 30, 2001. Since Montaron has been disqualified as prior art under § 103(c), withdrawal of the following rejections is respectfully requested: rejection of claims 5 and 38 over Montaron in view of Maehara; rejection of claim 29 over Arizmendi in view of Maehara and Montaron; and rejection of claim 39 over Sullaway, Maehara, and Montaron.

ALLOWABLE SUBJECT MATTER

Applicant acknowledges the allowance of claim 34 and the indication that claims 32 and 39 would be allowable if rewritten in independent form. Each of claims 32 and 39 have been rewritten in independent form, and therefore, are in condition for allowance.

Claims 40 and 41 have been cancelled, without prejudice.

REJECTION OF CLAIMS 2, 27, 28, 30, 31, 33, AND
44-46 OVER ARIZMENDI IN VIEW OF MAEHARA

It is respectfully submitted that a *prima facie* case of obviousness has not been established with respect to independent claim 2 for at least the reason that no motivation or suggestion existed to combine the teachings of Arizmendi and Maehara. It appears from the Office Action that the Examiner is asserting that superplastic materials have been around for a long time. According to the Office Action, Hayden (a reference issued in 1972) discloses superplastic materials, and Maehara (which issued in 1989) also teaches superplastic materials. Yet, despite the asserted well known availability of superplastic materials, Arizmendi clearly fails to suggest use of a superplastic material in the context of claim 1, namely in the context where a component including a seal is engageable with the element formed of a superplastic material to perform a predetermined downhole task. Arizmendi recognizes that elasticity is important to avoid fracturing. However, despite noting that elasticity is important, Arizmendi failed to recognize the use of superplastic materials. Arizmendi is evidence of the long-felt need for the claimed invention; yet, despite the availability of superplastic materials, Arizmendi still failed to suggest using superplastic materials in its apparatus. In view of the foregoing, it is clear that no motivation or suggestion existed to combine the teachings of Arizmendi and Maehara. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 2.

Claims dependent from claim 1 are allowable for at least the same reasons as claim 2. Furthermore, with respect to claim 30, which depends indirectly from claim 27, neither Arizmendi nor Maehara teaches or suggests a carrier line and a tool carried by the carrier line for deployment into a wellbore, where the tool comprises the element formed of the superplastic material and the component including the seal, and the tool further comprises a heating device to heat the superplastic material to a temperature such that the element exhibits superplastic behavior. The heating taught by Maehara is heating performed in the manufacturing context; therefore, Maehara provides no suggestion of a heating device that is part of a tool that also includes the superplastic material, where the tool is for deployment into a wellbore.

Claim 30 is thus allowable for the additional reason stated above.

REJECTION OF CLAIMS 2, 3, 27, 28, 30, 31, 33, 35, 36, AND 44-49

It is respectfully submitted that an obviousness rejection has not been established with respect to Sullaway and Maehara for at least the reason that no motivation or suggestion existed to combine the teachings of Sullaway and Maehara. The Office Action cited column 7, lines 35-46, of Sullaway as disclosing a steel element 11 (packer mandrel 11) that is engageable with a downhole seal 96. The Office Action conceded that Sullaway fails to disclose that the element is a superplastic material. 10/24/2006 Office Action at 5. However, the Office Action relied upon Maehara as disclosing a superplastic material. There is no suggestion in Sullaway of any desirability to incorporate a superplastic material in the packer mandrel 11 of Sullaway. The combination of references by the Office Action is based on impermissible hindsight that benefits from the disclosure of the present invention. There is absolutely no suggestion in Sullaway of any desirability for enhanced elasticity. The only apparent basis for substituting the steel packet mandrel 11 of Sullaway with a superplastic packet mandrel is the teachings of the present invention; however, using the present invention to piece together elements of the prior art reference constitutes impermissible hindsight. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 2 and its dependent claims.

Claim 30 is further allowable for the reason stated above with respect to the rejection of claim 30 over Arizmendi and Maehara.

REJECTION OF CLAIM 6 OVER MISZEWSKI AND HAYDEN

It is respectfully submitted that no motivation or suggestion existed to combine the teachings of Miszewski and Hayden. The Office Action conceded that Miszewski fails to disclose an element formed of a superplastic material. 10/24/2006 Office Action at 7. However, the Office Action cited Hayden as providing the teaching of a superplastic material. Although Miszewski teaches use of a shock absorber in a perforating gun string or a tubing string, there is no suggestion by Miszewski of any desirability to incorporate a superplastic material. There is no suggestion anywhere of any desirability for enhanced plasticity of the shock absorber of Miszewski. Therefore, the only basis for incorporating the teachings of Hayden into Miszewski appears to be impermissible hindsight that benefits from the teachings of the present invention. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 6.

REJECTION OF CLAIM 7 OVER THOMPSON AND HAYDEN

The Office Action also conceded that Thompson fails to disclose a releasable connector mechanism including an element formed of a superplastic material. 10/24/2006 Office Action at 8. However, the Office Action cited Hayden as disclosing use of a superplastic material. Again, there existed no suggestion of any desirability to enhance the plasticity of the releasable connector mechanism disclosed by Thompson. The only basis for incorporating the teachings of Hayden into Thompson is based on impermissible hindsight. Therefore, a *prima facie* case of obviousness has also not been established with respect to claim 7.

REJECTION OF CLAIMS 8 AND 9 OVER BOSSE-PLATIERE AND HAYDEN

No motivation or suggestion existed to combine the teachings of Bosse-Platiere and Hayden to achieve the claimed invention. The Office Action conceded Bosse-Platiere fails to disclose an explosive component including an element formed of a superplastic material. 10/24/2006 Office Action at 8. However, the Office Action cited Hayden as disclosing this feature. Specifically, the Office Action cited column 4, lines 32-37, of Bosse-Platiere, which refers to a downhole shaped charge that includes a steel outer case 24. There is no suggestion in Bosse-Platiere that it would be desirable to provide the case to have higher plasticity; therefore, the only apparent basis for incorporating the teachings of Hayden into Bosse-Platiere appears to be impermissible hindsight that benefits from the present invention.

A *prima facie* case of obviousness has therefore not been established with respect to claim 8 and its dependent claims.

REJECTION OF CLAIM 10 OVER MOHAUPT AND HAYDEN

No motivation or suggestion existed to combine the teachings of Mohaupt and Hayden. Although Mohaupt teaches a weak point connector that includes a skew element, there is no suggestion that it would be desirable to provide enhanced plasticity in the weak point connector. Therefore, the only apparent basis for incorporating the teachings of Hayden into Mohaupt appears to be impermissible hindsight. Therefore, a *prima facie* case of obviousness has not been established with respect to claim 10.

REJECTION OF CLAIMS 37, 42, AND 43

Each of independent claims 37 and 42 have been amended to recite a carrier line and a tool carried by a carrier line for deployment into the wellbore, where the tool includes the element formed of a superplastic material and a heating device to heat the element to a temperature such that the element exhibits superplastic behavior or superplasticity.

Since neither Nobileau nor Maehara teaches or suggests the added features of claims 37 and 42, it is respectfully submitted that a *prima facie* case of obviousness has not been established with respect to claims 37 and 42 (and dependent claim 43).

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Amendment Dated January 23, 2007
Reply to Office Action Mailed October 24, 2006

REJECTION OF CLAIMS 28 AND 29

Claims 28, 29, and 41 have been amended to address the § 112 rejection of claims 28 and 29, and the objection of claim 41.

REJECTION OF CLAIM 11

Independent claim 11 was rejected as being anticipated by Maehara. It is respectfully submitted that amended independent claim 11 is not disclosed by Maehara. Specifically, Maehara does not disclose a tool that is carried by a carrier line for deployment into a wellbore, where the tool includes both an element formed of a superplastic material to perform a predetermined downhole task, as well as a heating device to heat the element to a temperature sufficient to cause the element to exhibit superplastic behavior. The Office Action cited column 1, line 64-column 2, line 5, of Maehara as disclosing this feature of claim 11. The cited passage refers to products manufactured from duplex-phase stainless steel by superplastic working for use in seawater or drilling oil wells. Note, however, that the hot working method to perform superplastic working of the materials described in Maehara are performed at a manufacturing cite in forming the desired products. Thus, the heating described as part of the superplastic working techniques of Maehara are part of the manufacturing of the products that are based on the superplastic materials. There clearly did not exist any teaching by Maehara of a heating device as provided as part of a tool that is carried by a carrier line for deployment into a wellbore, where the element formed of the superplastic material is also part of the tool. Therefore, claim 11 is clearly not anticipated by Maehara.

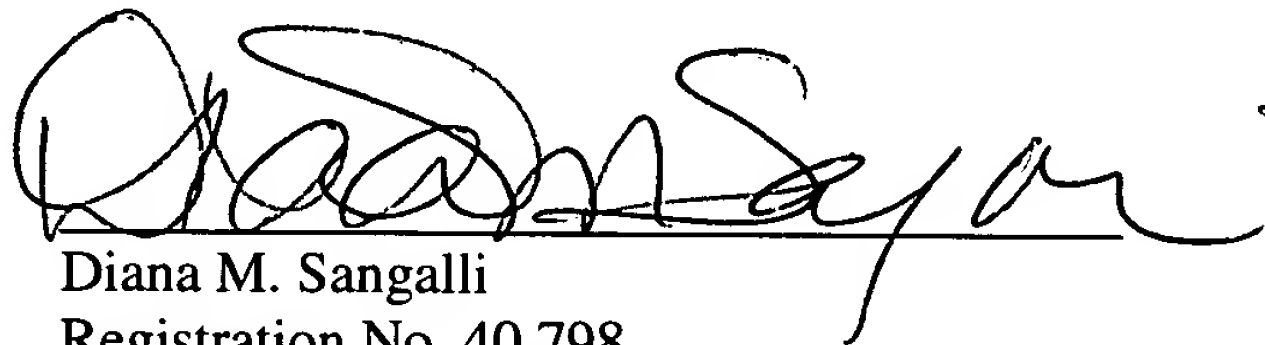
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CONCLUSION

In view of the foregoing, allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (SHL.0102US).

Respectfully submitted,

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